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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TADASHI NAKAMURA, KEIKO NAKAMURA,
EMIKO TAKASU, and ISAMU KANEDA

Appeal 2009-011755
Application 10/501,462
Technology Center 1600

Decided: June 29, 2010

Before DONALD E. ADAMS, RICHARD M. LEBOVITZ, and
FRANCISCO C. PRATS, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 by the Patent Applicant from the Patent Examiner's rejections of claims 1, 2, 4, and 6 in U.S. Application 10/501,462. The Board's jurisdiction for this appeal is under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

The claims are directed to a water-in-oil emulsified composition that comprises a microgel. The composition is described as a cosmetic that provides non-sticky, fresh, and good tactile sensation when applied to the skin (Spec. 1:7-11 & 22:9-23:10).

Claims 1, 2, 4, and 6 are pending and stand rejected under 35 U.S.C. § 103(a) as obvious in view of Delrieu (Delrieu, P. & Ding, L., US 5,961,990, issued Oct. 5, 1999) and Sato (Sato, T., Tokue, W., Matsuzaki, F., & Hariki, T, JP 2000219609 A, published Aug. 8, 2000, translated from Japanese into English by FLS, Inc.).

Claim 1 is representative and reads as follows:

1. A water-in-oil emulsified composition consisting essentially of:

- (a) 0.1-20 wt% organophilic clay mineral,
- (b) 10-70 wt% oil component,
- (c) 0.01 - 10 wt% emulsifier having an HLB value of not more than 7, and
- (d) 0.1-80 wt% microgel having an average particle size of 0.1-1,000^[1] micrometers obtained by dissolving in water or an aqueous component a hydrophilic compound having a gelation ability and consisting of one or more members selected from the group consisting of agar, carrageenan, curdlan, gelatin, gellan gum, and alginic acid followed by cooling below the gelation temperature to form a gel, which is then pulverized, said microgel containing only water or aqueous component and said hydrophilic compounds, wherein said emulsified composition contains 65.0 - 85.0 wt% of water phase parts which consist of water, aqueous components, and said microgel.

¹ In the Appendix to the Appeal Brief, the range was incorrectly written as "0.1-1,00." This was an error. "1,00" should have been "1,000."

STATEMENT OF THE ISSUES

Did the Examiner improperly interpret the scope of “consisting essentially of” as recited in claim 1?

Do the agar beads described in Delrieu, produced by a different process than claimed, meet the claimed limitation of a microgel produced, *inter alia*, by pulverization?

Did the Examiner provided an adequate reason under *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) to have modified the prior art to have made the claimed invention?

CLAIM INTERPRETATION

Claim 1 is directed to a water-in-oil composition “consisting essentially of” four specifically recited components, (a) through (d). The term “consisting essentially of” is a claim drafting term meaning that a claim is open to ingredients which “do not materially affect the basic and novel properties of the invention.” *PPG Industries v. Guardian Industries Corp.*, 156 F.3d 1351, 1354 (Fed. Cir. 1998). Thus, to interpret the scope of the claim, it is necessary to consult the Specification to identify the basic and novel properties of the claimed invention.

According to the Specification, the invention is a water-in-oil emulsified composition that “exhibits good emulsified states, does not change over different temperatures and/or time, has superior stability, and gives a non-sticky, fresh, and good tactile sensation during use.” (Spec. 1: 10-16; *see also* Spec. 2:1-6.) Because these characteristics are explicitly recited in the Specification, we consider them to define the invention’s “basic and novel properties.” Thus, the term “consisting essentially of”

excludes ingredients that affect any of these recited properties, but permits the addition of those ingredients which do not.

Component (d) of the claimed composition is a microgel “obtained by” a specifically recited process that includes dissolving, gelling, and pulverizing steps. When a product is defined by the process by which it is made, it is referred to as a “product-by-process” limitation.

“[Even] though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” MPEP § 2113 (8th ed., Rev. 2, May 2004) (quoting *In re Thorpe*, 777 F.2d at 698).

SmithKline Beecham Corp. v. Apotex Corp., 439 F.3d 1312, 1317 (Fed. Cir. 2006). The PTO has the initial burden of providing a rationale to show that the product described by the prior art is the same product which is claimed. *In re Marosi*, 710 F.2d 799, 802 (Fed. Cir. 1983). Once a prima facie case has been established, the burden shifts to Appellants “to prove that the prior art products do not necessarily or inherently possess the characteristics of [their] claimed product.” *In re Fitzgerald*, 619 F.2d 67, 70 (CCPA 1980); *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977). Thus, in making a rejection, the Examiner must provide a basis for believing that a microgel produced by a different process is the same as the microgel which is claimed.

FINDINGS OF FACT (“FF”)

1. Delrieu describes a cosmetic particulate gel delivery system for topical application of active agents comprising

discrete gel particles formed of:

- a) an agar gel; and
- b) a restraining polymer dispersed in the agar gel . . .
having retention groups to bind the active agent to the
restraining polymer for retention in the gel particles . . .

(Delrieu, col. 4, ll. 6-15.)

2. The agar-polymer complex gel particles are prepared by the following steps:

- a) dissolving agar and a water-soluble restraining polymer in water heated to an elevated temperature sufficient to dissolve the agar, in a proportion of agar to water effective to form a gel at lower temperatures;
 - b) cooling the hot agar solution to an intermediate temperature above the gelling point of the agar solution; and
 - c) discharging the cooled agar-polymer solution through a needle to form drops; and
 - d) exposing the drops to a hydrophobic liquid maintained at a temperature below the agar gelling point;
- whereby the drops are formed into gel beads incorporating the restraining polymer.

(*Id.* at col. 4, l. 64 to col. 5, l. 9.)

3. The agar particles have

an average particle size measured in millimeters. . . .
[P]referably do not exceed 10 mm. in diameter, on average, but not so small as to penetrate the skin or skin pores. A minimum diameter, on average, is about 0.05 mm. (50 microns [or micrometers]). A preferred range of particle sizes is from about 0.1 [100 micrometers] to 3.0 mm. in diameter, on average, with a more preferred range being from about 0.25 mm. [250 micrometers] to about 1 mm. in diameter, on average.

(*Id.* at col. 5, ll. 45-52.)

4. The restraining polymer is preferably water soluble, and include polysaccharides, especially celluloses (*id.* at col. 8, ll. 18-46).
5. “Water is also a significant ingredient of the carrier particles of the invention” (*id.* at col. 11, ll. 17-18).
6. “Preferably the solids comprise from about 0.5 to about 40 percent by weight of the solution or dispersion and more preferably from about 1.5 to about 25 percent by weight.” (*id.* at col. 11, ll. 31-33.)

DISCUSSION

The Examiner found that Sato described a water-in-oil emulsified composition with components (a) through (c) of claim 1 in overlapping amounts (Ans. 4-5). The Examiner acknowledged that Sato’s composition did not comprise an agar microgel (component (d)), but found that Delrieu described an agar gel with a particle size range that met the claimed range of 0.1-1,000 micrometer (*id.* at 5). The Examiner found that it was well known to blend a solid into a water-in-oil emulsion to increase its viscosity and that it would have been obvious to the person of ordinary skill in the art to use Delrieu’s solid agar particles to increase the viscosity of Sato’s composition (*id.* at 5-6). Appellants contend that the Examiner erred in making the determination that claim 1 would have been obvious to the person of ordinary skill in the art.

First, Appellants contend that Examiner improperly interpreted the scope of “consisting essentially of” as recited in claim 1, construing it to be equivalent to “comprising.” (App. Br. 12.) Appellants contend that the Specification “presents a clear indication of . . . the basic and novel characteristics . . . of the invention . . . defined by base Claim 1” (*id.*).

Citing *PPG*, Appellants state that “it is clear from the court’s discussion that the claimed invention . . . is open to unlisted ingredients and process steps that do not affect [the] basic and novel properties of the invention.” (*Id.* at 15.)

The Examiner did not misinterpret the claim scope nor the phrase “consisting essentially of.” The “consisting essentially of” limitation was added by an amendment filed May 22, 2008, after the January 28, 2008 mailing date of the Final Rejection. In a subsequent paper mailed June 18, 2008, the Examiner accurately characterized the meaning of “consisting essentially of” as characterized in the *PPG* case, but did not recognize the basic and novel characteristics of the claimed invention, perhaps because Appellants had not pointed them out when the May 22, 2008 amendment was introduced.

Nonetheless, in the Examiner’s Answer, the Examiner noted the invention’s basic and novel properties as recited in the Specification, but properly found that Appellants had not presented evidence that the combination of Sato and Delrieu resulted in composition with ingredients which would affect these properties (Ans. 6). For example, Appellants did not establish that Delrieu’s restraining polymer (FF1 & FF4) would have affected the composition’s stability, stickiness, and tactile sensation during (*see* Spec. 1: 10-16; *see also* Spec. 2:1-6). Accordingly, the Examiner properly found that the restraining polymer is not excluded from claim 1.

However, we agree with Appellants that the Examiner’s erred in finding that the “restraining polymer” of Delrieu met the “aqueous component” limitation of claim 1 (Ans. 7). The claim recites that the gel is “is obtained by dissolving in water or an aqueous component a hydrophilic

component.” In other words, the “hydrophilic component” is dissolved in water or another “aqueous component.” Delrieu’s restraining polymer is dissolved in water (FF2) and is therefore a “hydrophilic component,” not an “aqueous component” in which something could be dissolved. This error does not affect the determination that the claimed subject matter would have been obvious because, as discussed above, a restraining polymer is not excluded by the claims.

Secondly, Appellants contend that the agar beads described in Delrieu are made by a different process than the process recited in claim 1 and are not crushed nor a microgel as required by claim 1 (App. Br. 28).

When a product is claimed by the process by which it is made, the Examiner must provide evidence that the product described in the prior art is the same product which is claimed. *See In re Marosi*, 710 F.2d at 802. In this case, it was not disputed that Delrieu’s process (FF2) differs from the process recited in the claims. However, the Examiner established that the claimed gel particles overlapped with the range recited in Delrieu, providing a reasonable basis to believe that they are the same (Ans. 8-9; FF3). The burden therefore properly shifted to Appellants to prove the claimed processed produced.

Appellants did not meet this burden. They argued that the beads of Delrieu are not crushed as they are in claim 1 (App. Br. 22-23). However, the Examiner acknowledged this difference, but found that since Delrieu’s particles were of the same size as claimed, it was reasonable to believe that they were the same as the claimed microgel, despite the process differences. As particle size is the only physical requirement of the claimed microgel, the Examiner’s position was logical and supported by the evidence of record.

Appellants failed to provide persuasive evidence or argument to rebut the Examiner's conclusion.

Appellants also argued there is no disclosure of a composition in Delrieu of "an emulsified composition containing 65.0-85.0 wt% of water phase parts consisting of water, aqueous components, and said microgel" (*id.* at 23). This argument is not supported by the evidence. Delrieu states that water is "a significant ingredient of the carrier particle," and disclosed that solid particles comprised 0.5 to about 40 percent – suggesting that the water content would be from 60-99.5 percent (FF5 & FF6), a range overlapping with the claimed range. (*See also* Ans. 9.)

Appellants cited evidence in the Specification that crushed beads made according to the claimed process, when added to an emulsion, improved and conferred the characteristics described as the basic and novel properties of the invention (Spec. 23 & 26). While a *prima facie* case can be rebutted with unexpected results, Appellants did not assert that such results would have been unexpected or surprising to a person of ordinary skill in the art, a requirement necessary to establish unexpected results. *In re Soni*, 54 F.3d 746, 750 (Fed. Cir. 1995). Consequently, we do not consider this evidence persuasive.

Thirdly, Appellants contend that the Examiner did not comply with the requirements of *KSR* and *Graham v. John Deere*, 383 U.S. 1 (1966) (Reply Br. 5 & 7). Appellants argue that the Examiner did not provide a valid reason why a person of ordinary would have combined the teachings of Delrieu and Sato. (App. Br. 25-26.)

On pages 5-6 of the Answer, Examiner found that it was well known to blend a solid into a water-in-oil emulsion to increase its viscosity and that

it would have been obvious to a person of ordinary skill in the art to use Delrieu's solid agar particles to increase the viscosity of Sato's composition (*id.* at 5-6). Appellants contend that this reasoning is inadequate because of statements made in the Specification:

In the past, water-in-oil type emulsified cosmetic compositions having high stability have been obtained by increasing the viscosity of the outer phase (i.e., oil phase) by blending in solid and semisolid oil components. Thus, an oily and sticky sensation during use resulted, leading to poor evaluation results as a cosmetic.

(Spec. 1:19-25.)

In other words, Appellants' position is that persons of ordinary skill in the art would not have reasonably expected that adding solid particles to an emulsified composition would produce a composition with "non-stickiness, smoothness, or moistening sensation" (App. Br. 26).

This argument is not persuasive for several independent reasons. The claim does not require the water-in-oil emulsified composition to be non-sticky and smooth, and have moistening properties. Appellants have not established that all embodiments containing components (a)-(d) in the recited amounts would possess such properties. Thus, even were there an expectation that the addition of Delrieu's agar particles to Sato would produce a "sticky" composition, it has not been shown that all compositions within the scope of the claim would lack this characteristic.

In addition to this, the Specification states that the addition of "oil components" produces a "sticky sensation." However, the Examiner's proposed combination involves the addition of *agar particles* with restraining polymer. Appellants have not established that these ingredients are "oil components." Nor have Appellants established that persons of

ordinary skill in the art would have expected Delrieu's agar beads to produce the sticky sensation described in the Specification.

CONCLUSIONS OF LAW & SUMMARY

The Examiner did not improperly interpret the scope of "consisting essentially of" as recited in claim 1.

Appellants did not rebut the Examiner's finding that the agar beads described in Delrieu, produced by a different process than claimed, met the claimed limitation of a microgel produced, inter alia, by pulverization.

The Examiner provided an adequate reason under *KSR* to have modified the prior art to have made the claimed invention.

The rejection of claim 1 is affirmed. Claims 2, 4, and 6 were not separately argued and therefore fall with claim 1. 37 C.F.R. § 41.37(c)(1)(vii).

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

cdc

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